

Name \_\_\_\_\_

## Alloys in Manufacturing

**Alloys are solutions.** They are metallic substances composed of two or more elements, at least one of which is a metal.

A solution is a homogeneous mixture. Many people think the only way to form a solution is to dissolve a substance in a liquid, usually water. However, solutions may be gases, liquids, or solids.

Please complete the following items. This is the start of some necessary background information needed before we begin our unit on Alloys in Manufacturing:

- 1) **Read** section 7.3 p. 201 – 205 “Bonding in Metals” and “Building with Alloys”; and the excerpts about other alloys on pages R16, R42, and R43 in your chemistry textbook.  
*[There are extra chemistry textbooks out for the physics students to use.]*

- 2) Find **definitions** for the following terms and write them below:

Metallurgy

Ferrous metals

Nonferrous metals

- 3) Use the above articles, the Internet (see list of some links on the English Moodle page), textbooks, magazines, and other resources put out in class to find out more about several alloys. Keep a list of your sources. **Fill in the “Alloys” chart on the backside of this page.** You need to complete the entire chart.

Besides covering some basic background information about metallurgy, you will have a research project in English where you will use the information you learned. Those details will be discussed later. However, each person will need to choose any product made of an alloy. You may want to start thinking about what you'd like to research. You each need to pick an alloy and a product made of that specific alloy. You will have several tours and guest speakers throughout this unit in order to help you out.